In the specification

After the title and before the heading "Field of the Invention", please insert the following:

Cross-reference to Related Applications

This application is a filing under 35 USC §371 of PCT/EP2004/003066 filed with the European Patent Office on March 23, 2004, which claims the benefit of German Patent Application No. DE 10316573.8 filed on April 10, 2003.

Please replace the paragraph on page 18, line 27 to page 19, line 2, with the following paragraph:

The examination of the shape-memory characteristics occurs through strain-controlled cyclical thermo-mechanical experiments. Here, the sample is stretched at a temperature above the switching segment transition temperature (T_h) to a specified maximum strain (ε_m) and held there for a certain time (t_{ha}). Then at constant strain, the material is cooled to a temperature below the switching segment transition temperature (T_l) at a cooling rate of $ß_c$. This is maintained for a period (t_l) to fix the stretched state. Then the sample is released and the clamps of the materials testing machine are returned to the initial position. By heating the sample to T_h and maintaining it over a period t_{hb}, the permanent shape of the sample is restored; this concludes a cycle and it can be started again from the beginning. In Fig. ~~1~~ 4 the typical trace for a strain-controlled, cyclical, thermo-mechanical tensile strain experiment is shown schematically.

Please replace the paragraph on page 19, lines 10-12, with the following paragraph:

In Fig. ~~2~~ 5 the measurement programme of the strain-controlled cycle is shown schematically. The dotted lines indicate a change of temperature from T_h to T_l. The vertical line (- - -) describes the end of the first cycle. The next cycle then follows.

Please replace the paragraph on page 19, lines 18-23, with the following paragraph:

The examination of the shape-memory characteristics in dependence of the composition of the binary polymer blend from solution is examined on the materials which permit a strain of 100% at $T > T_{trans}$. If the mechanical characteristics are observed at 50°C, then the polymer blends, which contain PDA(64), cannot be examined, because their extensibility is not sufficiently high. Fig. ~~3~~ 6 shows the typical trace of a standard experiment with an example of the polymer blend PDA(50) / PCA(47)[22/28]. The cycles N = 1 and the following cycles N = 2 to 5 are shown.

Please replace the paragraph on page 19, line 24 to page 20, line 5 with the following paragraph:

The real strain εl achieved is somewhat above ε_m for all cycles. It is noticeable that the strain recovery rate in the first cycle only reaches about 64%. This can be explained by yielding of the amorphous segments or by plastic deformation of the hard segment. The curves of the following cycles reach values for R_r of more than 90%. This shows that a high strain recovery rate is only possible when the material has already been stretched once. Furthermore, a change in the stress can be observed during $T > T_{trans}$ at constant strain and in the following cooling process. First, this reduces before it increases again. This relationship is illustrated in Fig. [4] 7 in

dependence of the time. Additionally, the trace of the temperature in dependence of time is shown.

Please replace the paragraph on page 22, lines 25-30 with the following paragraph:

To check the even distribution of the individual components the composition in the resulting billet is examined in dependence of the dwell time in the extruder during the second extrusion. To do this, an example of a polymer blend is selected and the billet subdivided into sections. The composition of the sections is examined by means of 1H-NMR spectroscopy. The extruded billet of a polymer blend PDA(42) / PCA(68)[23/40] is subdivided into uniform sections 70 cm in length and each part (T0 - T9) is examined by 1H-NMR spectroscopy (Fig. ~~5~~ 8).

Please replace the paragraph on page 23, lines 25-28 with the following paragraph:

The strain-controlled standard cycles are carried out with the parameters given above. Fig. 9 illustrates the typical trace of a strain-controlled, cyclical, thermo-mechanical experiment for the extruded polymer blend PDA(50) / PCA(68)[30/27].

Please replace the paragraph on page 33, lines 1-3 with the following paragraph:

Fig. ~~1~~ 4: Schematic representation of a strain-controlled, cyclical, thermo-mechanical tensile strain experiment. The sample is fixed at maximum strain ε_m at T_l and the shape is restored in the relaxed state at T_h.

Please replace the paragraph on page 34, lines 1-3 with the following paragraph:

Fig. ~~2~~ 5: Schematic representation of the principle of the strain-controlled thermo-mechanical cycle. The change of the temperature from T_h to T_l and from T_l to T_h is indicated with a dotted line (.....). The last vertical line (- - -) identifies the end of the first cycle.

Please replace the paragraph on page 35, lines 1-2 with the following paragraph:

Fig. ~~3~~ 6: Illustration of a strain-controlled, cyclical, thermo-mechanical tensile strain experiment with an example of the polymer blend PDA(50) / PCA(47)[22/28] at T_h = 50°C, T_l = 0°C and ε_m = 100%.

Please replace the paragraph on page 36, lines 1-2 with the following paragraph:

Fig. [4] 7: Temperature T (---) and stress σ (-) in dependence of time during a strain-controlled, cyclical, thermo-mechanical cycle for an example of the polymer blend PDA(50) / PCA(47)[22/28].

Please replace the paragraph on page 37, lines 1-4 with the following paragraph:

Fig. ~~5~~ 8: Composition of the extruded polymer blend PDA(42) / PCA(68)[23/40] in dependence of the dwell time in extruder during the second extrusion. T0 gives the composition at the beginning of the 2nd extrusion, T1 to T8 describe the compositions of the billet at a spacing of 70 cm and T9 gives the composition of the end of the last piece of billet.

Please replace the paragraph on page 38, lines 1-3 with the following paragraph:

Fig. ~~6~~ 9: Illustration of a strain-controlled, cyclical, thermo-mechanical tensile strain experiment with an example of the extruded polymer blend PDA(50) / PCA(68)[30/27] at T_h = 50°C, T_l = 0°C and ε_m = 100%.